

A METHOD AND SYSTEM FOR MODELING AND
AUTOMATICALLY GENERATING AN ELECTRONIC DESIGN
FROM A SYSTEM-LEVEL ENVIRONMENT

ABSTRACT

Method and system for creating an electronic circuit design from a system-level environment. A plurality of user-selectable system-level design objects are provided in the system-level environment. Each system-level design object is defined by a system-level function and is selectable by a system-level designer. A plurality of hardware-level design objects are also provided. Each hardware-level design object is configured to generate a hardware definition of a hardware-level function. Each system-level design object maps to one or more hardware-level design objects. In response to selections made by the designer, a system-level design is instantiated in a system-level design file. The system-level design includes user-selected ones of the system-level design objects. The system simulates behavior of the system-level design consistent with both the system-level functions and behavior of a hardware definition from the hardware-level design objects that implement the user-selected ones of the system-level design objects.